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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,117	12/04/2003	Rainer Dittrich	22733	7654

535 7590 05/31/2005

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EXAMINER

ANDREWS, MELVYN J

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/728,117

Applicant(s)

DITTRICH ET AL.

Examiner

Melvyn J. Andrews

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 5-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 621-04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: on page 6, line 24, page 7, line 24, page 11, line 21, page 13, line 22 and page 18. misprints occur.

Appropriate correction is required. Applicants explanation has been noted but **the specification has not been amended** by applicants

### ***Information Disclosure Statement***

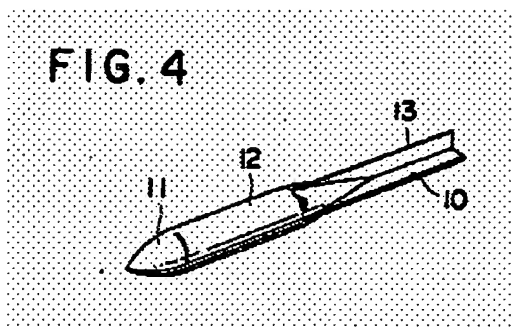
The information disclosure statement filed June 21, 2003 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. The copies of the publications AS, AT, AU, AW and AX have been submitted but the IDS Form PTO-1449 does not properly identify all the sources or dates of these publications as required, see MPEP 609.

An **another** IDS has apparently not been filed to correct the IDS of June 21, 2003.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 1 to 3, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nashiwa et al (US 4,043, 798). Nashiwa et al discloses a process for producing steel using a projectile for introducing calcium into molten steel as shown in FIG.4



The projectile has a diameter of 5 to 100mm, preferably 25 to 50 mm which overlaps the claimed feeding pieces with a size 2 to 50 mm (col. 4, lines 23 to col.5, line 54) in view of which the crux of the process as claimed in Claim 1 is regarded as obvious. The apparatus limitation of Claims 9, 10 and 11 are regarded as obvious since these features are conventional.

#### ***Response to Arguments***

Applicant's arguments filed March 1, 2005 have been fully considered but they are not persuasive. Nashiwa et al discloses a shell of the projectile of fire-proof paper which would be expected to be porous and the calcium additives contained in the shell may be granular which would be expected to include spaces or be porous (col.4, lines 43 to col.5, line 9).

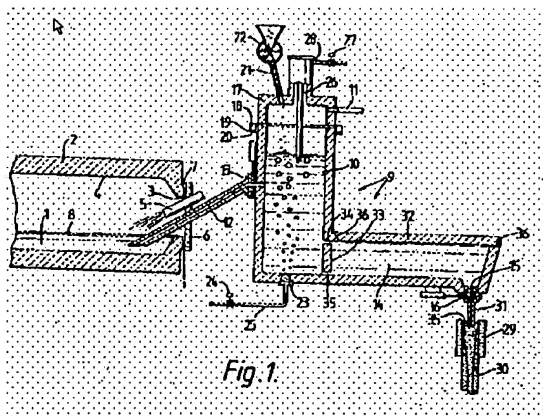
Claims 1 to 3 and 5 to 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter et al (US 5,110,351). Hunter et al discloses a method of promoting the decarburization reaction in a vacuum furnace comprising adding manganese ore which is crushed and sized prior to being added to the bath the ore added to the bath being less than 2 inches (50.4 mm) in diameter and the manganese

ore is more than 3/8 inches (9.5mm) in diameter which overlaps the claimed range of the feeding pieces which apparently the crux of the claimed process .

### ***Response to Arguments***

Applicant's arguments filed March 1, 2005 have been fully considered but they are not persuasive. The Hunter et al addition agent having been crushed is in pieces which would be expected to be porous.

Claims 8 to 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter et al (US 5,110,351) as applied to claims 1-7 above, and further in view of Sherwood (US 4,51,865). Sherwood discloses a degassing column chamber as shown in Fig.1.



It would have been obvious to one ordinary skill in the art at the time the invention was made to supply the Nashiwa et al manganese ore by the Sherwood means (col. 4, lines 25 to 42).

***Response to Arguments***

Applicant's arguments filed March 1, 2005 have been fully considered but they are not persuasive. Sherwood discloses feeding alloys and reagents which as shown in the Fig.1 to be granular (col.4, lines 25 to 42).

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patent Abstracts of Japan Publication Number 01129925. Patent Abstracts of Japan discloses a method for adding calcium to molten steel in granular or lump form (see Abstract) which suggests the crux of the claimed process.

***Response to Arguments***

Applicant's arguments filed march 1, 2005 have been fully considered but they are not persuasive. It would be expected that the additives would be porous.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patent Abstracts of Japan 55107718 which discloses the production of molten steel comprising molten iron being sucked up to which scale, iron ore is added which suggests the crux of the claimed process . It would be expected that the additives would be porous

***Response to Arguments***

Applicant's arguments filed march 1, 2005 have been fully considered but they are not persuasive. It would be expected that the additives would be porous.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bogan et al (US 5,228,902). Bogan et al discloses a method of desulfurization in vacuum processing of steel by adding a desulfurizing agent in lump form which has an average particle size from about ¼ inch to about 3 inches which overlaps the claimed range of the feeding pieces. It would be expected that the additives would be porous

### ***Response to Arguments***

Applicant's arguments filed March 1, 2005 have been fully considered but they are not persuasive. It would be expected that the additives would be porous.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rossborough (US 5,358,550) discloses a desulfurization agent comprising a porous slag-forming agent (see Abstract).

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvyn J. Andrews whose telephone number is (571)272-1239. The examiner can normally be reached on 8:00A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on (571)272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJA  
March 26, 2005

  
**MELVYN ANDREWS**  
**PRIMARY EXAMINER**